

S
Insect Control
(Fall of 1937)
Dixie

Cedar City, Utah,
October 18, 1937.

REPORT ON INSECT SURVEY, SEVIER DIVISION, DIXIE N. F.

FALL OF 1937.

Introduction

History of Black Hills Beetle (*Dendroctonus ponderosa*).

An epidemic of the Black Hills Beetle was discovered in 1935 on the Blue Spring Mountain, a section of the Panguitch Lake Unit. A small control job was done that spring and a hundred percent spotting cruise that fall showed 800 trees to be treated the following spring.

A hundred percent spotting cruise was made on some parts of the Panguitch Lake Unit and the Upper Mammoth in the fall of 1936 and a small control job treating part of the trees that were found.

The spring of 1937, 1,275 trees were treated on 29,600 acres in the Panguitch Lake, Lower Mammoth, Upper Mammoth, Pass Creek and Strawberry - Swains Creek Units.

Description

General

The total timbered area of the Sevier Division of the Dixie National Forest was cruised at two and one-half percent. The Division is divided into nine units. Seven of the nine units contain practically all the timbered areas, and these units were cruised at two and one-half percent in all Ponderosa pine and Spruce types.

Timber Types

Ponderosa pine predominates at the lower elevations, with Spruce, Alpine fir and Douglas fir mixed with it at the upper limits. At higher elevations Engelmann spruce is the predominating species mixed with Alpine

fir and Douglas fir.

Crew Organization

Three forestry students did the cruising. The personnel included Oscar Deming, and Clark B. Hardy as Field Aides, with J. P. Jones acting as chief-of-party. Deming had had no experience in either survey or insect control work, and Hardy had worked on the spring control job but had not done any survey work.

Camps

Camps were at Panguitch Lake and Duck Creek Ranger Stations. A government pickup furnished the transportation.

Procedure

The first two days were spent in teaching the two Field Aides their jobs by the chief-of-party. The men worked alone, running on a compass line, and taking a strip one chain wide twice through a section. No strips were in large openings or out of type, making it two and one-half percent of the timbered area rather than of the total area.

Drainages and natural boundaries were used instead of section corners. Known corners were used to check location and describe starting and finishing points.

In solid bodies of timber, the form of a rectangle was followed. Strips were run from road to ridge top, or some natural boundary and back to road, etc. Often the strips were three or four miles in length giving the cruiser the minimum amount of offset.

The amount of strip that was run per man-day depended upon the topography, density, and amount of infestation. For each day's work a strip sheet, giving course of travel, the number of new attacks, and the

number of red tops, was used. Each individual infested tree on strip was recorded as to location, diameter, height, height of attack, number of attacks per square foot, vigor and crown classification.

Discussion as Per Unit

Virgin Unit I

This unit includes the drainages south into the Rio Virgin River. The topography is rough and the Ponderosa pine is immature and scattered. In sixteen miles of strip no trees were seen on line, but five single infested trees were seen near line. Few red tops were seen. No control work has been done on this unit to date and none is recommended at this time.

Strawberry-Swain Creek Unit II

This unit includes the drainages of Strawberry, Swain, Willis and Duck Creeks. Five thousand two hundred and eighty acres of this area were covered last spring and 289 trees were treated. There are still two small areas that should be treated.

One of the above-mentioned areas is just north and east of the Mammoth Creek - Cedar-Long Valley Road Junction in Sections 4 and 9, T 37 S, R 7 W. Some control measures were done in the spring of 1937, but time did not allow completion of the control work before the flight of the beetles. The area includes about one and one-half sections, and according to our survey, should have about fifty infested trees on it. A cruise of seven and one-half percent was made on this portion of the unit and four infested trees were found on six miles of strip. Areas surrounding this tract are apparently free from infestation but this

tract should be treated.

The other area in this unit that needs immediate attention is in Strawberry Canyon. From Broad Hollow to Strawberry Creek shows light infestation with a "hot spot" in Lars Fork. A two and one-half percent cruise of the area showed five trees found on strip.

A number of infested trees were seen in the Lars Fork drainage but none happened to fall on strip. A five percent cruise of the Lars Fork drainage was run and five trees fell on seven miles of strip with a total of twenty-six infested trees seen. Further investigation by Ranger Hurst revealed twenty red tops in one clump with thirty-five (plus twenty which had already been marked for cutting) trees in the immediate vicinity, part of which were seen by the cruiser. The cruise shows one hundred fifty six infested trees on an area of approximately three sections. The areas around this "hot spot" are clean. This area should be treated.

The Spruce in this unit is in no immediate danger except a narrow strip along the bottom of the canyon in upper Strawberry Creek. There are many dead trees and approximately twenty newly infested trees on a mile and one-half along the bottom of the canyon. This small area is near Lars Fork and should be treated.

Upper Mammoth Unit III

This was the most thorough unit worked in the spring of 1937. The survey shows the area to be clean with the exception of the Tommy Creek drainage which was not worked in former control jobs.

The Tommy Creek drainage includes approximately four sections, and shows four trees on seven miles of strip, or one hundred and sixty trees on total area, according to the survey calculation. However, ERA control

crews have been working on this area since October 1 and up to October 15 one hundred and seventy-five trees had been treated and Ranger Hurst estimates there are one hundred and twenty-five additional infested trees to treat which will be accomplished by October 27.

The country south, east and north of Tommy Creek has all been treated and is practically free from Black Hills Beetle.

The Spruce in this unit has a slight infestation but does not justify control at this time but will bear watching. On seventy-five miles of strip, three infested trees were found.

Lower Mammoth Unit IV

The predominating timber type is Ponderosa pine but the survey shows infestation very light. Two trees were seen on fourteen miles of strip. On this unit sixty-six trees were treated in the spring of 1937.

Pass Creek Unit V

A total of two hundred fifty-three trees were treated on part of this unit in the latter part of June, 1937, but fall survey shows a light infestation over the whole unit with a "hot spot" around the Coal Pit area and Panguitch Creek drainage. Twelve trees were seen on strip (five in one group) on about eight and one-half sections. On a two and one-half percent survey this would make four hundred and eighty infested trees on this area, but it is my opinion there will not be over two hundred trees found. On the remainder of the unit, two single trees were seen on seventeen miles of line.

Panguitch Lake Unit VI

This unit includes the Blue Spring Mountain where treating was done in the spring and fall of 1936. During the spring of 1937 there were forty-

nine trees treated. According to this fall survey, the area is clean of the Black Hills Beetle. As shown on the table, no trees were found on line in thirty-two miles.

Spry Unit VIII

This unit was cruised by Ranger Hurst and he estimates there were about one hundred and twenty infested trees to be treated. A control job was started September 15 and one hundred trees have been treated. This area should be thoroughly treated this fall.

Cedar Unit IX

This unit is at a high elevation and the topography is rough and steep. Spruce-Fir is the predominating type. There is a slight infestation in Spruce but control is not recommended at this time. There was a group of fifteen infested Engelmann spruce trees marked and cut under administrative use permit by a small mill operator in Parowan Canyon in early fall of 1937. After they were taken out, the fall cruise through this area shows one infested tree on seven miles of strip or one tree to every three and one-half sections. The slabs of these Spruce logs will be burned at the saw mill.

The work of the Spruce Beetle is serious and spruce areas should be given close attention in the future.

Conclusions and Recommendations

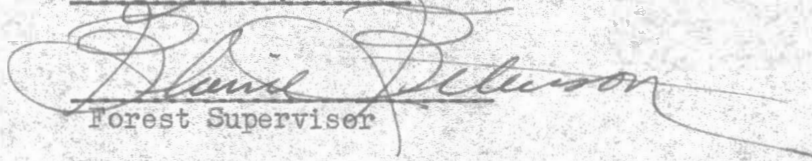
In conclusion we feel that the Sevier Division of the Dixie National Forest is out of immediate danger of insect infestation after the four above-mentioned "hot spots" are cleaned up. All timbered areas of any size have been cruised.

We recommend that the four dangerous areas mentioned in this report be controlled as quickly as possible with properly trained men and over-head.

JAY P. JONES

Chief-of-Party

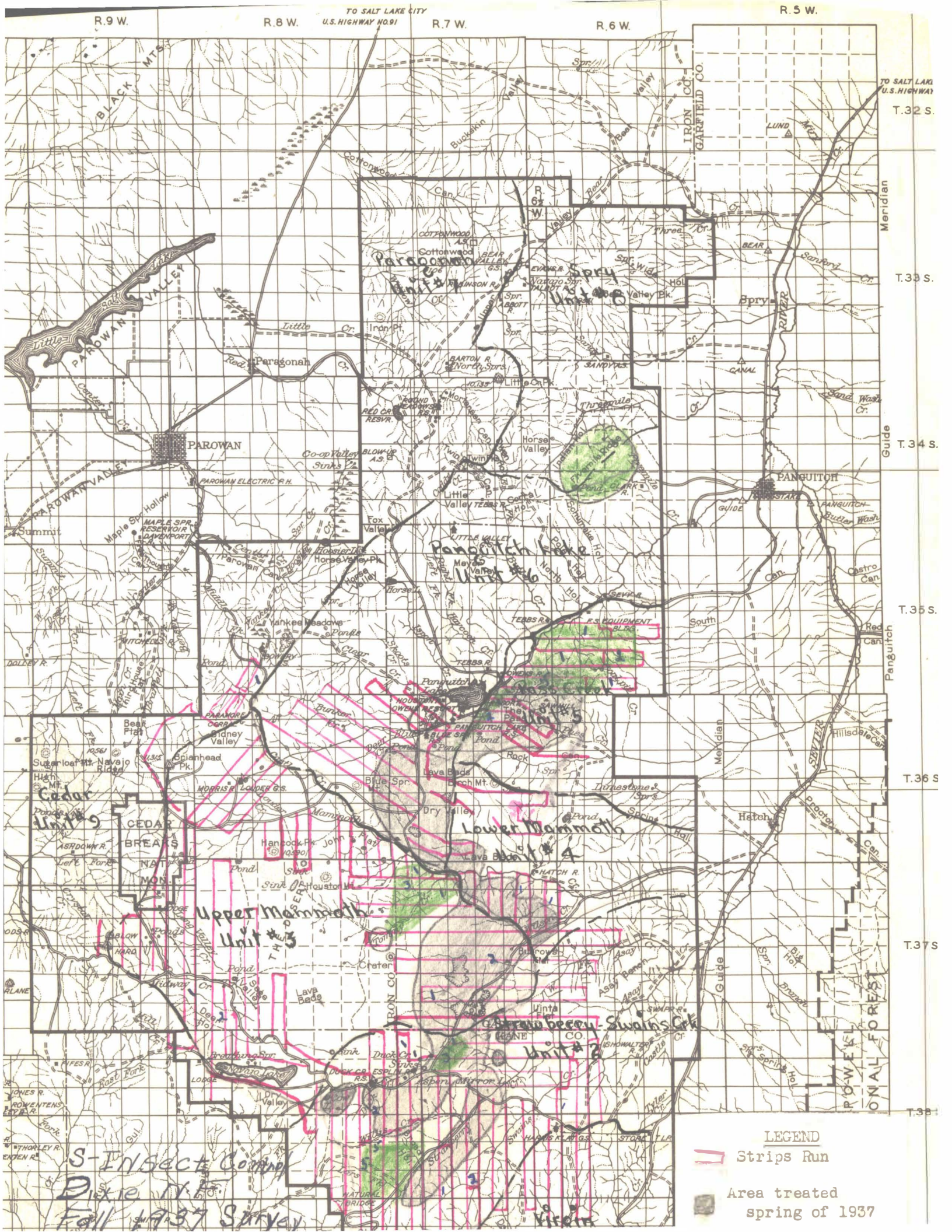
Approved: October 18, 1937


Forest Supervisor

INSECT SURVEY SUMMARY

Dixie National Forest Fall 1937

UNIT	Man-Days	% % Cruise	Miles of Strip	Area in Sections	New Attacks	Red Tops
Total	73		177	196	54	105
Virgin #I	2	2½	16	8	0	1
Strawberry-Swain Creek #II	22	2½	138	69	25	31
Upper Mammoth #III	21	2½	127	63½	14	9
Lower Mammoth #IV	3	2½	14	7	2	4
Pass Creek #V	14	2½	34	17	12	36
Panguitch Lake #VI	7	2½	37	18½	0	24
Cedar #IX (Spruce)	4	2½	12	6	0	0



R. 9 W.

R. 8 W.

TO SALT LAKE CITY
U.S. HIGHWAY NO. 91

R. 7 W.

R. 6 W.

R. 5 W.

TO SALT LAKE
U.S. HIGHWAY
T. 32 S.

T. 33 S.

T. 34 S.

T. 35 S.

T. 36 S.

T. 37 S.

T. 38 S.

Meridian

Guide

Panguitch

LEGEND

Strips Run

Area treated
spring of 1937

S-Insect Control
Dixie N.F.
Fall 1937 Survey

Total infested trees seen:

<u>No.</u>	<u>Specie of beetle</u>
4 Trees (Near U Turn)	still green, Bark scales are off and full of holes
N 18 chs	
2 trees	Foliage almost gone
N 37 chs (on line)	
1 tree	Foliage almost gone

1937 treated trees on strip

Total infested trees seen:

<u>No.</u>	<u>Species of beetle</u>
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3 trees on E sec line of Sec 11 T 36 S R 9 W in Near Creek S W of Mitchell's saw mill	
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1 tree seen in bud or mammoth creek near March	
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1937 treated trees on strip

Total infested trees seen:

<u>No.</u>	<u>Specie of beetle</u>

1937 treated trees on strip